**NEW! Shielded Power Inductor**

For Analog Devices AD5758BCPZ Digital-to-analog converter (DAC)

- Designed for Analog Devices AD5758BCPZ single-channel, voltage and current output digital-to-analog converter (DAC) with Dynamic Power Control (DPC)
- AEC-200 Grade 3 qualified (−40°C to +85°C ambient)
- 4.0 x 4.0 mm footprint; less than 1.8 mm tall

**Core material** Ferrite  
**Environmental** RoHS compliant, halogen free  
**Terminations** Matte tin over nickel over silver.

**Weight** 54 – 100 mg  
**Ambient temperature** −40°C to +85°C with Irms current up to +125°C, at 50 mA continuous current or 200 mA for short durations  
**Maximum part temperature** +125°C (ambient + temp rise). Derating.  
**Storage temperature** Component: −40°C to +125°C. 
Tape and reel packaging: −40°C to +80°C  
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles  
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)  
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332  
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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**Part number**  
**Inductance ±20% (µH)**  
**DCR max (Ohms)**  
**SRF typ (MHz)**  
**Isat (A)**  
**Irms (A)**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance</th>
<th>DCR max</th>
<th>SRF typ</th>
<th>Isat 10% drop</th>
<th>Isat 20% drop</th>
<th>Isat 30% drop</th>
<th>Irms 20°C rise</th>
<th>Irms 40°C rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA6594-AE_</td>
<td>47.0</td>
<td>0.650</td>
<td>16</td>
<td>0.51</td>
<td>0.55</td>
<td>0.56</td>
<td>0.45</td>
<td>0.68</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:  
PA6594-AEC  
**Packaging**  
C= 7” machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).  
B= Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added ($25 charge), use code letter C instead.  
D= 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3500 parts per full reel).  

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A. Inductance at 1 MHz is the same for parts with SRF ≥10 MHz.  
3. DCR measured on a micro-ohmmeter.  
4. SRF measured using Agilent/HP 8753ES or equivalent.  
5. DC current at 25°C that causes the specified inductance drop from its value without current.  
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.  
7. Electrical specifications at 25°C.  
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Shielded Power Inductor – PA6594-AE

L vs Current

* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm.

Packaging 1000/7” reel; 3500/13” reel  Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.9 mm pocket depth

Recommended pick and place nozzle OD: 4 mm; ID: ≤ 2 mm